



THE

ONTARIO WATER RESOURCES

COMMISSION

A.

TABILIATION

OF THE

WATER AND SEWAGE WORKS

REQUIREMENTS

IN THE

PROVINCE OF ONTARIO

DIVISION OF SANITARY ENGINEERING

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Prepared by

The Division of Sanitary Engineering

June, 1964



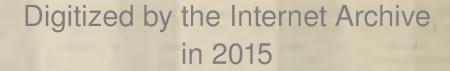
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INTRODUCTION

The Division of Sanitary Engineering has undertaken a study of the water and sewage works requirements in the Province of Ontario. The needs of the municipalities have been tabulated under various categories showing brief descriptions of the works required as well as estimates of cost. Certain of the larger municipalities, in which continuous programs are underway, as well as the small rural municipalities where there appears to be no immediate need, have been purposely excluded.

The cost estimates have been derived from various sources including consulting engineers' reports, capital budget forecasts and statistical cost data based on actual construction costs. In the majority of municippalities, the cost estimates are representative of the immediate requirements, whereas in some instances, the costs are applicable to the ultimate needs.

It is interesting to observe the number of municipalities in which limited financial resources have restricted the development of projects. In many cases, it has been necessary to compromise on treatment requirements and in some municipalities, the entire program has been deferred indefinitely.



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A

SUMMARY

OF THE

WATER AND SEWAGE WORKS

REQUIREMENTS

IN THE

PROVINCE OF ONTARIO

| | | | | | | | Estimated |
|------|----------|-------|-----|-------|------------------------------------------------------------------------------------------------------|------------------|---------------|
| | | | | | | Population | Cost |
| WATE | R WORKS | | | | | | |
| | (a) | Table | I | - | Municipalities with Existing Water Works Systems Requiring Improvements | 683,190 | \$ 34,870,000 |
| | (b) | Table | II | - | Municipalities Requiring Water Works Systems | 63,406 | 7,605,000 |
| | | | | | Total | 746,596 | \$ 42,475,000 |
| | (c) | Table | III | - | Municipalities (included above) Where Financial Limitations Restrict the Development of Water Works | 64,113 | \$ 5,570,000 |
| SEWA | GE WORKS | 3 | | | | | |
| | (a) | Table | IV | - | Municipalities Requiring Sewers and Sewage Treatment | 305,048 | \$ 50,923,000 |
| | (b) | Table | V | - | Municipalities with Sewers and No Treatment | 420,904 | 64,050,000 |
| | (c) | Table | VI | **COB | Municipal Sewage Treatment Plants That Are Overloaded or Inefficient | 880,730 | 43,874,000 |
| | | | | | Total | 1,606,682 | \$158,847,000 |
| | (d) | Table | VII | - | Municipalities (included above) Where Financial Limitations Restrict the Development of Sewage Works | 375 , 294 | \$ 52,167,000 |
| | | | | | | | |

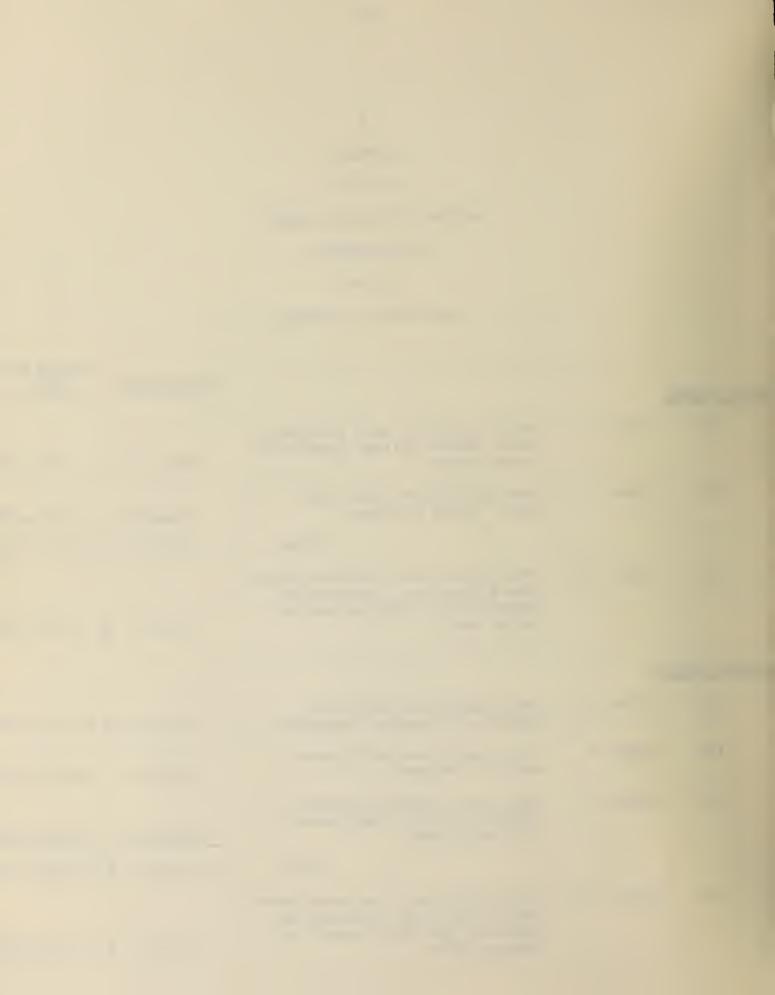
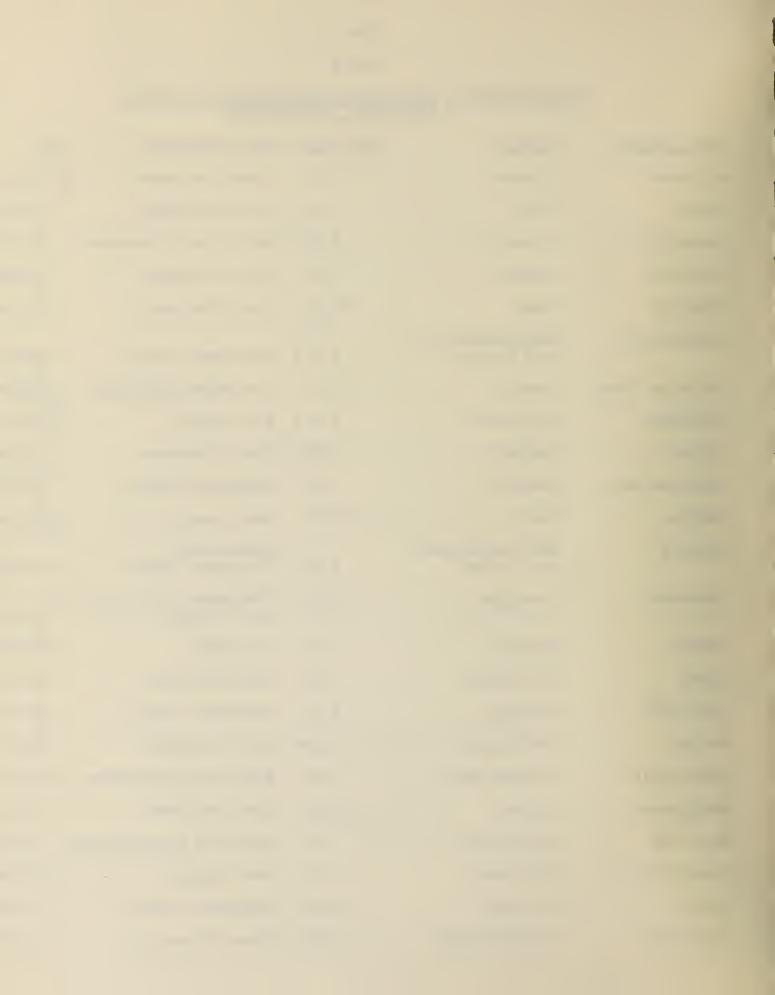


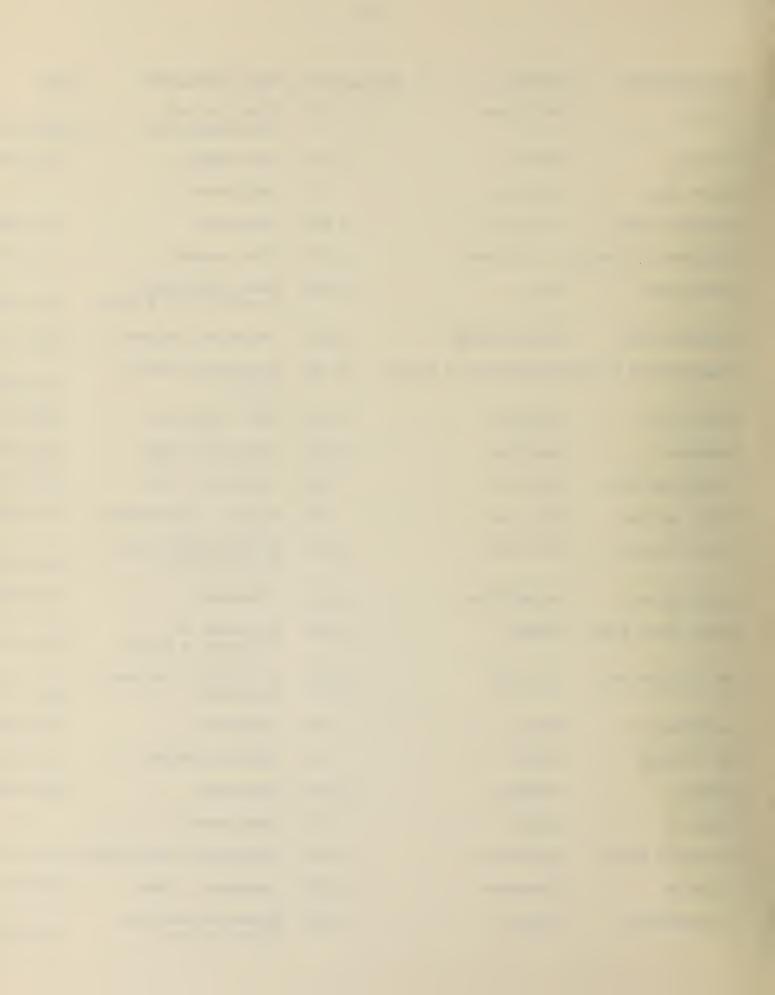
TABLE I

MUNICIPALITIES WITH EXISTING WATER WORKS SYSTEMS REQUIRING IMPROVEMENTS

| Municipality | County | <u>Population</u> | Works Required | Cost |
|----------------|---------------------------|-------------------|-------------------------------------|----------------|
| Alliston | Simcoe | 3,057 | Iron Treatment | \$ 100,000 |
| Aurora | York | 9,518 | Iron Treatment | 170,000 |
| Beamsville | Lincoln | 2,290 | Additional Treatment | 200,000 |
| Bradford | Simcoe | 2,374 | Iron Treatment | 100,000 |
| Brampton | Peel | 26,191 | Iron Treatment | 200,000 |
| Bowmanville | Northumberland and Durham | 7,532 | Treatment Plant | 200,000 |
| Carleton Place | Lanark | 4,771 | Increased Treatment | 150,000 |
| Caledonia | Haldimand | 2,355 | New Source | 1,000,000 |
| Capreol | Sudbury | 3,006 | Iron Treatment | 100,000 |
| Chapleau Twp. | Sudbury | 3,758 | Treatment Plant | 150,000 |
| Chatham | Kent | 30,116 | Lake Supply | 3,000,000 |
| Cobourg | Northumberland and Durham | 9,917 | Storage and Treatment Plant | 600,000 |
| Deseronto | Hastings | 1,775 | Treatment; Distribution and Storage | lon 200,000 |
| Dryden | Kenora | 6,230 | Treatment | 200,000 |
| Elora | Wellington | 1,489 | Iron Treatment | 100,000 |
| Fort Erie | Welland | 9,119 | Treatment Plant | 300,000 |
| Fergus | Wellington | 4,009 | Iron Treatment | 200,000 |
| Geraldton | Thunder Bay | 3,551 | Additional Treatment | 150,000 |
| Georgetown | Halton | 11,177 | Iron Treatment | 250,000 |
| Gore Bay | Manitoulin | 716 | Improved Distribution | 50,000 |
| Hagersville | Haldimand | 2,046 | Lake Supply | 600,000 |
| Hearst | Cochrane | 2,587 | Treatment Plant | 150,000 |
| Lakefield | Peterborough | 2,200 | Plant Extension | 100,000 |



| Municipality | <u>County</u> <u>Por</u> | ulation | Works Required | Cost |
|--------------------|--------------------------|---------|-------------------------------------|------------|
| London | Middlesex | 171,116 | Pipeline and Treatment Plant \$ | 14,600,000 |
| Midland | Simcoe | 8,917 | New Supply | 300,000 |
| Moore Twp. | Lambton | 540 | New Source | on |
| Mountjoy Twp. | Cochrane | 2,634 | Treatment | 250,000 |
| Niagara-on-the-La | ke Niagara | 2,770 | Pretreatment | 75,000 |
| Owen Sound | Grey | 17,877 | Lake Supply and Distribution System | 400,000 |
| Peterborough | Peterborough | 51,257 | Treatment Extension | 1,000,000 |
| Plantagenet N. Twp | .Prescott and Russell | 2,106 | New Source Under Study | 100,000 |
| Port Perry | Ontario | 2,353 | Iron Treatment | 150,000 |
| Pembroke | Renfrew | 16,223 | Treatment Plant | 500,000 |
| Pickering Twp. | Ontario | 7,000 | Treatment Plant | 600,000 |
| Port Carling | Muskoka | 501 | Storage Distribution | 100,000 |
| Port Colborne | Welland | 17,403 | New Treatment and Distribution | 1,000,000 |
| Rainy River | Rainy River | 1,133 | Treatment | 100,000 |
| Sault Ste. Marie | Algoma | 44,551 | Pipeline or Filtration Plant | 1,400,000 |
| St. Catharines | Lincoln | 85,732 | 10 M.G.D. Treatment Extension | 2,000,000 |
| Southampton | Bruce | 1,814 | Treatment | 100,000 |
| St. George | Brant | 716 | Revised System | 170,000 |
| Sarnia | Lambton | 50,607 | Treatment | 2,000,000 |
| Stayner | Simcoe | 1,746 | Improvements | a |
| Sturgeon Falls | Nipissing | 6,651 | Treatment Improvemen | ts 100,000 |
| Timmins | Cochrane | 28,985 | Treatment Plant | 1,000,000 |
| Tillsonburg | Oxford | 6,790 | Elevated Storage Distribution | 250,000 |



| Municipality | County | Population | Works Required | Cost |
|------------------|-----------|------------|------------------------------------------|---------|
| Victoria Harbour | Simcoe | 1,047 | New Pumphouse and Distribution System \$ | 75,000 |
| Waterdown | Wentworth | 1,937 | New Supply | 150,000 |
| Wicksteed Twp. | Algoma | 1,000 | System Improvements | 180,000 |

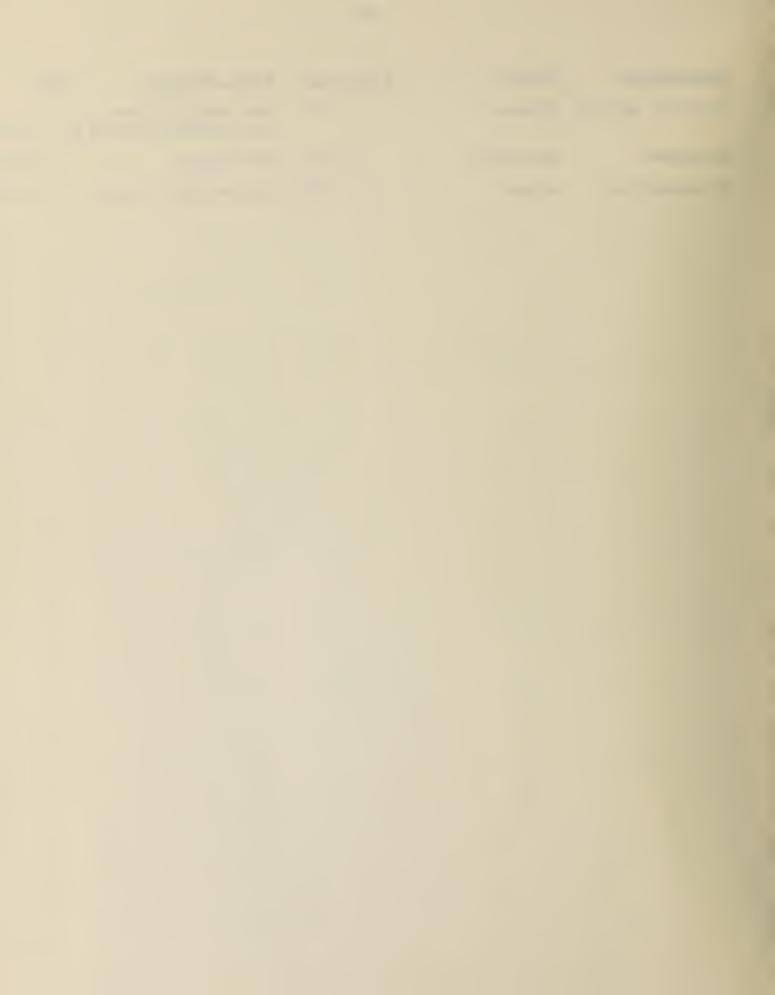
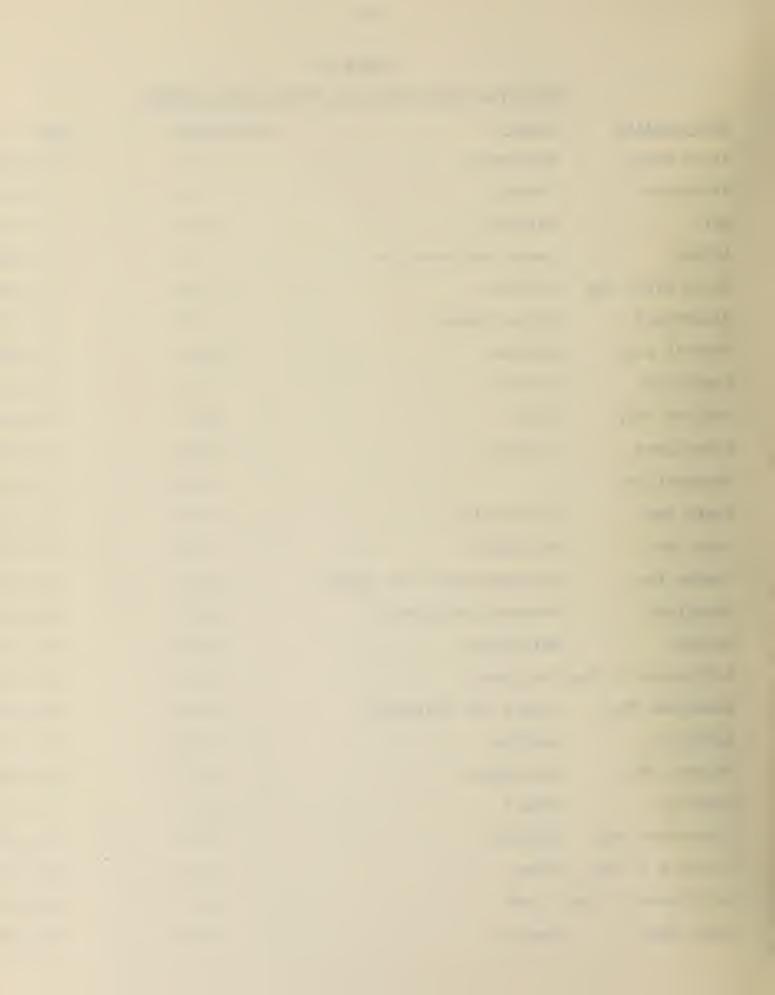


TABLE II

MUNICIPALITIES REQUIRING WATER WORKS SYSTEMS

| Municipality | County | Population | Cost |
|-------------------|---------------------------|------------|------------|
| Ailsa Craig | Middlesex | 521 | \$ 150,000 |
| Alvinston | Lambton | 644 | 160,000 |
| Ayr | Waterloo | 1,058 | 170,000 |
| Athens | Leeds and Grenville | 973 | 170,000 |
| Black River Twp. | Cochrane | 3,285 | 200,000 |
| Bloomfield | Prince Edward | 929 | 150,000 |
| Barry's Bay | Renfrew | 1,397 | 200,000 |
| Beachville | Oxford | 900 | 160,000 |
| Burford Twp. | Brant | 1,061 | 170,000 |
| Bobcaygeon | Victoria | 1,240 | 250,000 |
| Brunetville | | 600 | 150,000 |
| Bucke Twp. | Timiskaming | 1,786 | 100,000 |
| Cache Bay | Nipissing | 790 | 250,000 |
| Clarke Twp. | Northumberland and Durham | 3,801 | 200,000 |
| Casselman | Prescott and Russell | 1,278 | 200,000 |
| Drayton | Wellington | 640 | 150,000 |
| Dorchester N. Twp | .Middlesex | 914 | 170,000 |
| Ernestown Twp. | Lennox and Addington | 5,956 | 200,000 |
| Eganville | Renfrew | 1,528 | 100,000 |
| Eramosa Twp. | Wellington | 857 | 160,000 |
| Essa Twp. | Simcoe | 1,180 | 170,000 |
| Gloucester Twp. | Carleton | 809 | 160,000 |
| Gosfield N. Twp. | Essex | 695 | 160,000 |
| Gwillimbury E. Tw | p. York | 603 | 160,000 |
| Grand Bend | Lambton | 667 | 250,000 |



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| Municipality | County | opulation | Cost |
|-------------------|--------------------------------|-----------|------------|
| Haliburton | Haliburton | 500 | \$ 120,000 |
| Himsworth N. Twp. | Parry Sound | 1,991 | 200,000 |
| Killaloe Station | Renfrew | 896 | 160,000 |
| Lancaster | Stormont, Dundas and Glengarry | 572 | 160,000 |
| Lanark | Lanark | 868 | 250,000 |
| Maxville | Stormont, Dundas and Glengarry | 844 | 160,000 |
| Neustadt | Grey | 533 | 150,000 |
| Osgoode Twp. | Carleton | 590 | 160,000 |
| Omemee | Victoria | 817 | 160,000 |
| Rayside Twp. | Hastings | 4,947 | 200,000 |
| Richmond | Carleton | 1,268 | 200,000 |
| Russell Twp. | Prescott and Russell | 3,744 | 170,000 |
| Red Lake Twp. | Kenora | 2,666 | 350,000 |
| Thamesville | Kent | 981 | 275,000 |
| Vankleek Hill | Prescott and Russell | 1,708 | 250,000 |
| Wilmot Twp. | Waterloo | 5,692 | 120,000 |
| Westport | Leeds and Grenville | 677 | 160,000 |

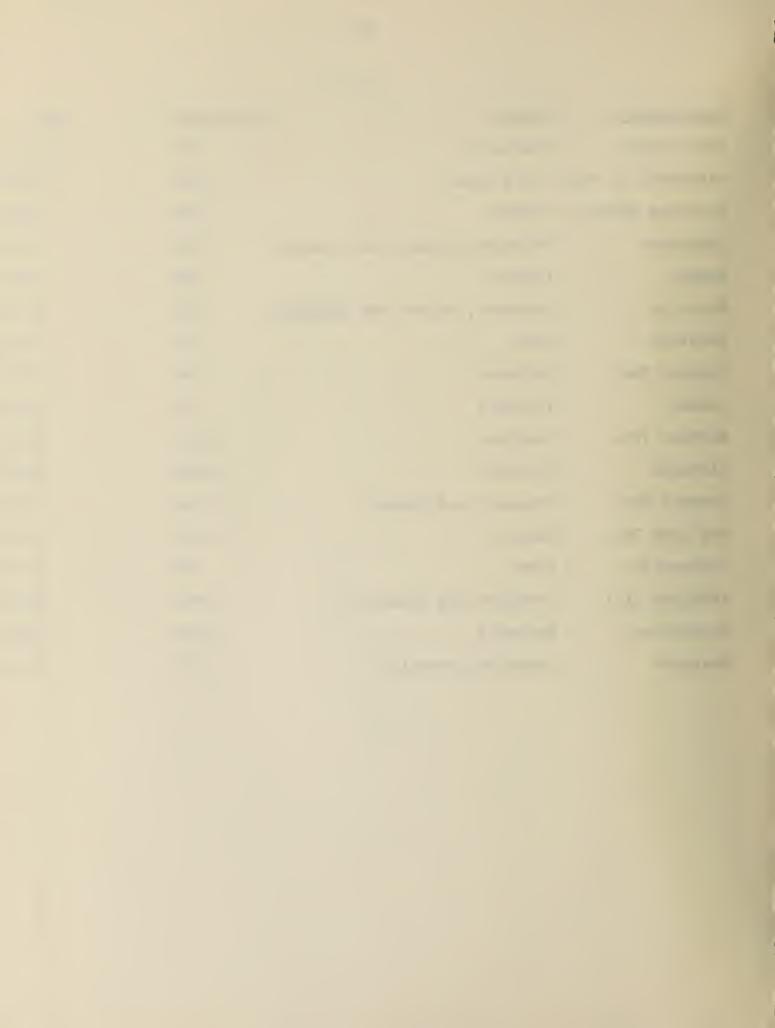


TABLE III

MUNICIPALITIES WHERE FINANCIAL LIMITATIONS RESTRICT THE DEVELOPMENT OF WATER WORKS

| Municipality | <u>County</u> <u>Popt</u> | ulation | Works Required | Cost |
|------------------|---------------------------|---------|---------------------|------------|
| Ailsa Craig | Middlesex | 521 | New System | \$ 150,000 |
| Alvinston | Lambton | 644 | New System | 160,000 |
| Bloomfield | Prince Edward | 729 | New System | 150,000 |
| Bobcaygeon | Victoria | 1,240 | New System | 250,000 |
| Bucke Twp. | Timiskaming | | New System | 100,000 |
| Cache Bay | Nipissing | 790 | New System | 250,000 |
| Casselman | Prescott and Russell | 1,278 | New System | 200,000 |
| Deseronto | Hastings | 1,775 | Treatment, etc. | 200,000 |
| Ernestown Twp. | Lennox and Addington | 5,956 | New System | 200,000 |
| Eganville | Renfrew | 1,528 | System Additions | 100,000 |
| Fort Erie | Welland | 9,119 | Treatment | 300,000 |
| Grand Bend | Lambton | | New System | 250,000 |
| Hagersville | Haldimand | 2,046 | Lake Supply | 600,000 |
| Haliburton | Haliburton | 500 | New System | 120,000 |
| Lanark | Lanark | 868 | New System | 250,000 |
| Maxville | Stormont | | New System | 160,000 |
| Mountjoy Twp. | Cochrane | 2,634 | Treatment | 250,000 |
| Southampton | Bruce | 1,814 | Treatment | 100,000 |
| Thamesville | Kent | 981 | New System | 275,000 |
| Timmins | Cochrane | 28,935 | Treatment | 1,000,000 |
| Vankleek Hill | Prescott and Russell | 1,708 | New System | 250,000 |
| Victoria Harbour | Simcoe | 1,047 | New Pumphouse | 75,000 |
| Wicksteed Twp. | Algoma | 1,000 | System Improvements | 180,000 |

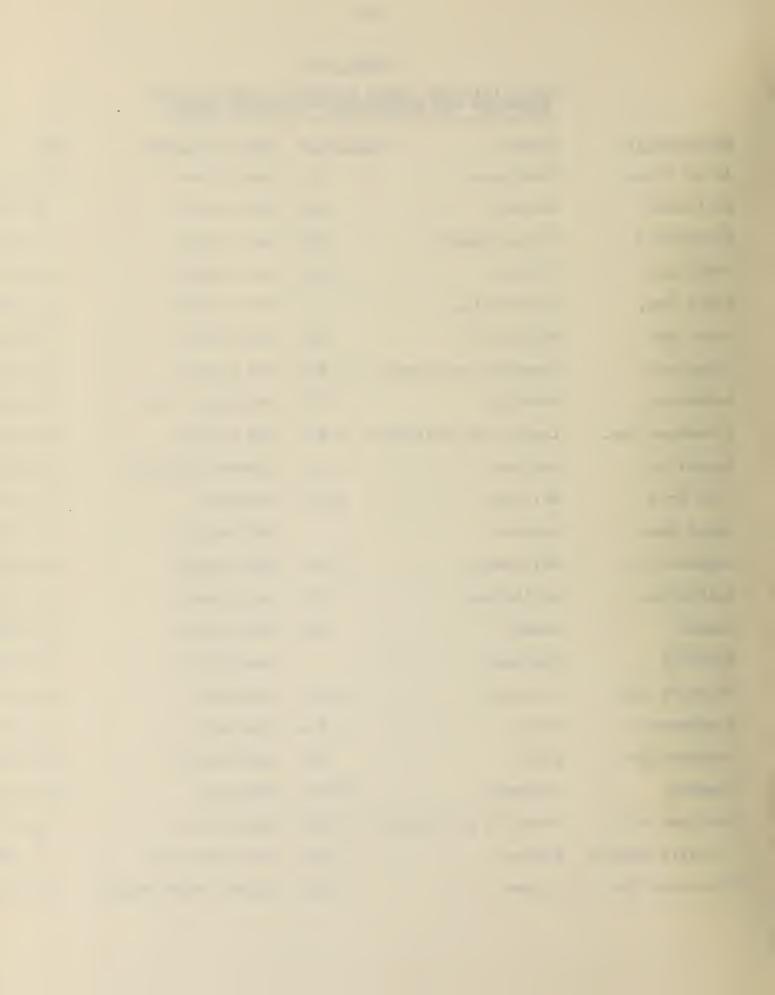
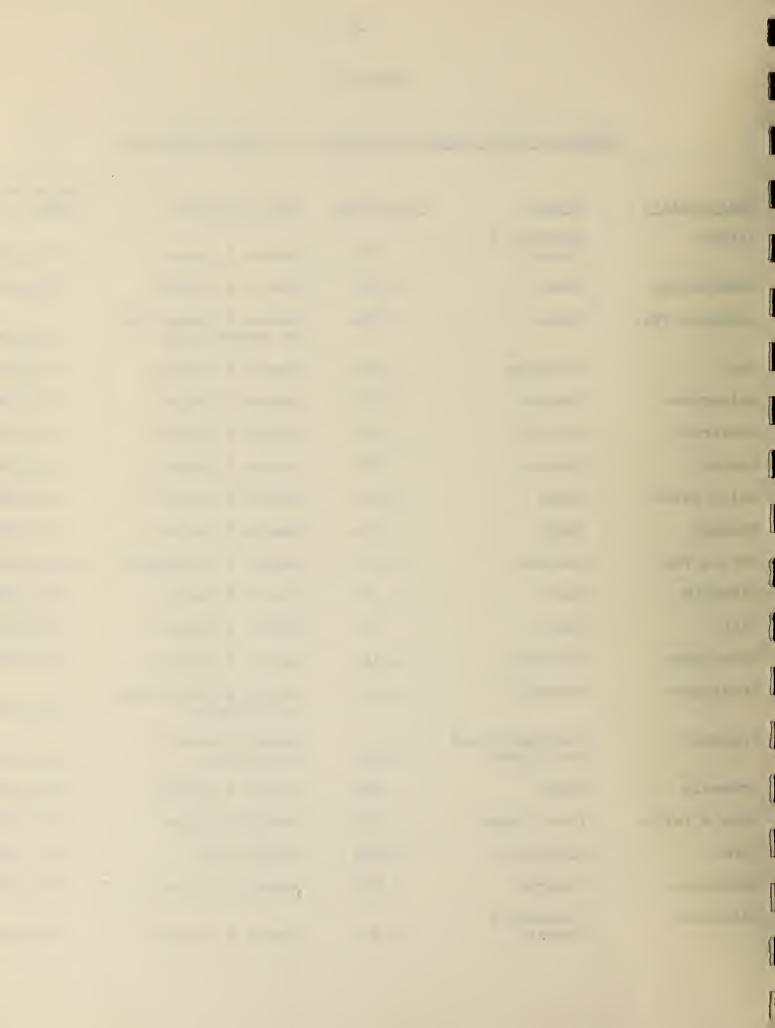


TABLE IV

MUNICIPALITIES REQUIRING SEWERS AND SEWAGE TREATMENT

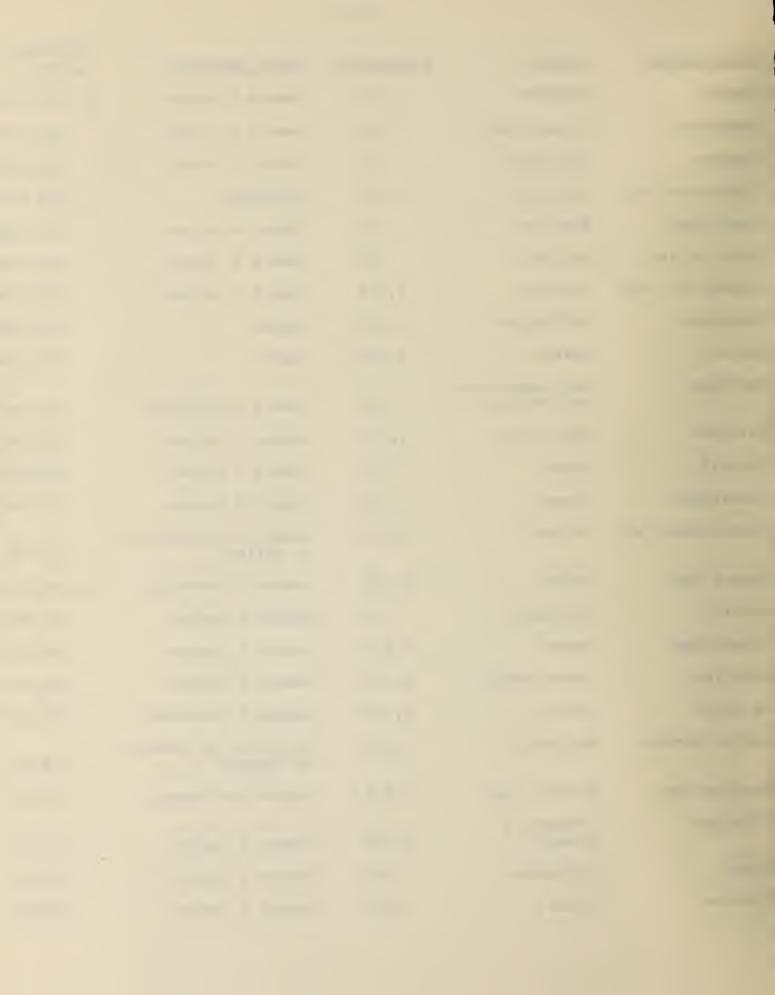
| Munici pality | County | Population | Works Required | Estimated Cost |
|---------------|---------------------------|------------|------------------------------------|-------------------|
| Alfred | Prescott & Russell | 983 | Sewers & Lagoon | \$ 260,000 |
| Amher stburg | Essex | 4,381 | Sewers & Primary | 900,000 |
| Anderdon Twp. | Essex | 3,804 | Sewers & Connection to Amherstburg | 240,000 |
| Ayr | Waterloo | 1,058 | Sewers & Lagoon | 350,000 |
| Balmertown | Kenora | 1,836 | Sewers & Lagoon | 350,000 |
| Beaverton | Ontario | 1,205 | Sewers & Lagoon | 530,000 |
| Beeton | Simcoe | 881 | Sewers & Lagoon | 263,000 |
| Belle River | Essex | 1,920 | Sewers & Lagoon | 300,000 |
| Belmont | Elgin | 734 | Sewers & Lagoon | 363,000 |
| Bertie Twp. | Welland | 8,567 | Sewers & Secondary | 1,100,000 |
| Blenheim | Kent | 3,331 | Sewers & Lagoon | 450,000 |
| Blyth | Huron | 745 | Sewers & Lagoon | 250,000 |
| Bobcaygeon | Victoria | 1,240 | Sewers & Lagoon | 263,000 |
| Bridgeport | Waterloo | 1,720 | Sewers & Connection to Kitchener | 610,000 |
| Brighton | Northumberland and Durham | 2,686 | Sewer & Lagoon Extensions | 460,000 |
| Brussels | Huron | 820 | Sewers & Lagoon | 260,000 |
| Burk's Falls | Parry Sound | 942 | Sewers & Lagoon | 270,000 |
| Byron | Middlesex | 3,343 | Sewers only | 315,000 |
| Cannington | Ontario | 1,056 | Sewers & Lagoon | 270,000 |
| Casselman | Prescott & Russell | 1,278 | Sewers & Lagoon | 270,000 |



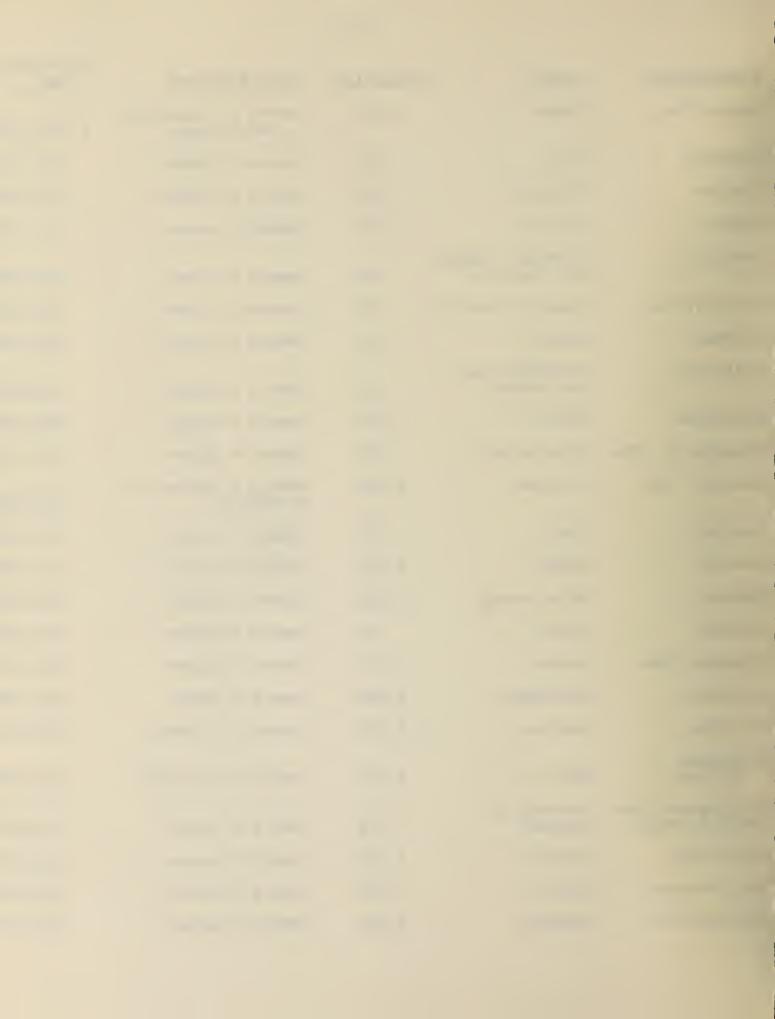
| Municipality | County | Population Population | Works Required | Estimated Cost |
|--------------------|--------------------------------|-----------------------|--------------------------------|----------------|
| Cayuga | Haldimand | 961 | Sewers & Lagoon | \$ 260,000 |
| Chesterville | Stormont, Dundas and Glengarry | 1,275 | Sewers & Lagoon | 265,000 |
| Clifford | Wellington | 556 | Sewers & Lagoon | 200,000 |
| Colborne | Northumberland and Durham | 1,371 | Sewer and Lagoon Extensions | 100,000 |
| Colchester S. Twp. | Essex | 3,506 | Sewers & Lagoon | 386,000 |
| Coldwater | Simcoe | 775 | Sewers & Lagoon | 300,000 |
| Creemore | Simcoe | 884 | Sewers & Lagoon | 254,000 |
| Deseronto | Hastings | 1,775 | Sewers & Lagoon | 300,000 |
| Drayton | Wellington | 640 | Sewers & Lagoon | 240,000 |
| Dresden | Kent | 2,304 | Sewers & Lagoon | 335,000 |
| Dumfries S. Twp. | Brant | 3,248 | Sewers & Lagoon | 386,000 |
| Dundalk | Grey | 9 2 6 | Sewers & Lagoon | 250,000 |
| Durham | Grey | 2,450 | Sewers & Aerated Lagoon | 335,000 |
| Dutton | Elgin | 799 | Sewers & Lagoon | 300,000 |
| Eganville | Renfrew | 1,528 | Sewers & Lagoon | 280,000 |
| Embrun | Prescott & Russell | 1,110 | Sewers & Lagoon | 280,000 |
| Emo | Rainy River | 1,023 | Sewers & Lagoon | 175,000 |
| Erin | Wellington | 1,102 | Sewers & Lagoon | 260,000 |
| Ernestown Twp. | Lennox & Addington | 5,956 | Sewers & Lagoon | 425,000 |
| Essex | Essex | 3,494 | Sewers & Lagoon | 267,000 |
| Fauquier Twp. | Cochrane | 1,348 | Sewers & Lagoon | 270,000 |
| Fenelon Falls | Victoria | 1,272 | Sewers & Lagoon | 272,000 |
| Flesherton | Grey | 503 | Sewers & Lagoon | 200,000 |
| Fonthill | Welland | 2,572 | Sewers & Lagoon | 335,000 |



| Municipality | County | Population | Works Required | Estimated Cost |
|------------------|------------------------------|------------|--------------------------------|-------------------|
| Forest | Lambton | 2,137 | Sewers & Lagoon | \$ 330,000 |
| Geraldton | Thunder Bay | 3,551 | Sewers & Lagoon | 450,000 |
| Glencoe | Middlesex | 1,179 | Sewers & Lagoon | 490,000 |
| Gloucester Twp. | Carleton | 19,205 | Secondary | 1,000,000 |
| Grand Bend | Lambton | 667 | Sewers & Lagoon | 415,000 |
| Grand Valley | Dufferin | 722 | Sewers & Lagoon | 250,000 |
| Grimsby N. Twp. | Lincoln | 6,212 | Sewers & Lagoon | 900,000 |
| Harriston | Wellington | 1,655 | Lagoon | 140,000 |
| Harrow | Essex | 1,756 | Lagoon | 292,000 |
| Hastings | Northumberland and Durham | 883 | Sewers & Secondary | 310,000 |
| Havelock | H ali burt o n | 1,277 | Sewers & Lagoon | 263,000 |
| Hensall | Huron | 949 | Sewers & Lagoon | 260,000 |
| Hornepayne | Algoma | 900 | Sewers & Lagoon | 263,000 |
| Humberstone Twp. | Welland | 4,611 | Sewers & Connection to Welland | 450,000 |
| Ignace Twp. | Kenora | 10,996 | Sewers & Secondary | 1,300,000 |
| Jarvis | Haldimand | 762 | Sewers & Lagoon | 255,000 |
| Kincardine | Bruce | 2,875 | Sewers & Lagoon | 490,000 |
| Lakefield | Peterborough | 2,200 | Sewers & Lagoon | 440,000 |
| La Salle | Essex | 2,500 | Sewers & Secondary | 472,000 |
| Little Current | Manitoulin | 1,554 | Extension of Sewers and Lagoon | 328,000 |
| Longlac Twp. | Thunder Bay | 1,213 | Sewers and Lagoon | 320,000 |
| L'Orignal | Prescott & Russell | 1,289 | Sewers & Lagoon | 283,000 |
| Lucan | Middlesex | 950 | Sewers & Lagoon | 260,000 |
| Lucknow | Bruce | 1,066 | Sewers & Lagoon | 260,000 |



| Municipality | County E | opulation | Works Required | imated Cost |
|------------------------------------|--------------------------------|-----------|------------------------------------|----------------|
| Malden Twp. | Essex | 2,320 | Sewers & Connection to Amherstburg | \$ 220,000 |
| Markdale | Grey | 1,111 | Sewers & Lagoon | 268,000 |
| Marmora | Hastings | 1,308 | Sewers & Lagoon | 272,000 |
| Massey | Sudbury | 1,317 | Sewers & Lagoon | 265,000 |
| Maxville | Stormont, Dundas and Glengarry | 844 | Sewers & Lagoon | 258,000 |
| Merrickville | Leeds & Grenville | 890 | Sewers & Lagoon | 200,000 |
| Mildmay | Bruce | 875 | Sewers & Lagoon | 258,000 |
| Millbrook | Northumberland and Durham | 863 | Sewers & Lagoon | 258,000 |
| Milverton | Perth | 1,122 | Sewers & Lagoon | 260,000 |
| Monaghan N. Twp. | Peterborough | 815 | Sewers & Lagoon | 240,000 |
| Mountjoy Twp. | Cochrane | 2,634 | Sewers & Connection to Timmins | 275,000 |
| Neustadt | Grey | 533 | Sewers & Lagoon | 200,000 |
| Norwich | Oxford | 1,662 | Sewers & Lagoon | 430,000 |
| Norwood | Peterborough | 1,093 | Sewers & Lagoon | 260,000 |
| Paisley | Bruce | 744 | Sewers & Lagoon | 255,000 |
| Pakenham Twp. | Lanark | 1,163 | Sewers & Lagoon | 200,000 |
| Parkhill | Middlesex | 1,089 | Sewers & Lagoon | 265,000 |
| Petawawa | Renfrew | 1,857 | Sewers & Primary | 385,000 |
| Pickering Village | Ontario | 1,816 | Sewers & Secondary | 580,000 |
| Plantagenet Twps. North & South | Prescott & Russell | 923 | Sewers & Lagoon | 258,000 |
| Port Perry | Ontario | 2,353 | Sewers & Lagoon | 335,000 |
| Port Stanley | Elgin | 1,436 | Sewers & Lagoon | 575,000 |
| Rayside Twp. | Sudbury | 5,208 | Sewers & Lagoon | 535,000 |



| Municipality | <u>County</u> <u>Population</u> | | Works Required | Estimated Cost | |
|------------------|---------------------------------|--------|-------------------------------------|----------------|--|
| Red Lake Twp. | Kenora | 2,666 | Sewers & Lagoon | \$ 350,000 | |
| Richmond | Carleton | 1,268 | Sewers & Lagoon | 272,000 | |
| Ridgetown | Kent | 2,690 | Sewers & Lagoon | 760,000 | |
| Rockland | Prescott & Russell | 3,470 | Sewers & Lagoon | 226,000 | |
| Rodney | Elgin | 1,049 | Sewers & Lagoon | 260,000 | |
| St. Clair Beach | Essex | 1,521 | Sewers & Secondary | 640,000 | |
| St. Marys | Perth | 4,646 | Sewers & Secondary | 1,000,000 | |
| Sandwich E. Twp. | Essex | 22,070 | Sewers & Connection to Windsor | 1,300,000 | |
| Sandwich S. Twp. | Essex | 4,609 | Sewers & Connection to Windsor | 360,000 | |
| Sarnia Twp. | Lambton | 8,453 | Sewers & Connection to Sarnia | 574,000 | |
| Schreiber | Thunder Bay | 2,177 | Sewers & Lagoon | 315,000 | |
| Seneca Twp. | Haldimand | 2,109 | Sewers & Connection to Caledonia | 260,000 | |
| South River | Parry Sound | 985 | Sewers & Lagoon | 260,000 | |
| Stafford Twp. | Renfrew | 3,356 | Sewers & Connection to Pembroke | 350,000 | |
| Stayner | Simcoe | 1,746 | Sewers & Lagoon | 380,000 | |
| Tecumseh | Essex | 4,458 | Sewers & Secondary | 700,000 | |
| Teeswater | Bruce | 935 | Sewers & Lagoon | 270,000 | |
| Thamesville | Kent | 981 | Sewers & Lagoon | 260,000 | |
| Thessalon | Algoma | 1,707 | Sewers & Lagoon | 290,000 | |
| Tilbury | Kent | 3,107 | Sewers & Lagoon | 50,000 | |
| Vankleek Hill | Prescott & Russell | 1,708 | Sewers & Lagoon | 290,000 | |
| Victoria Harbour | Simcoe | 1,032 | Sewers & Lagoon | 260,000 | |



| Municipality | County | Population | Works Required | Estimated Cost | |
|-----------------|-----------|------------|--------------------------------|-------------------|--|
| Wainfleet Twp. | Welland | 4,875 | Sewers & Connection to Welland | \$ 384,000 | |
| Wallaceburg | Kent | 7,998 | Sewers & Secondary | 2,434,000 | |
| Wasaga Beach | Simcoe | 488 | Sewers & Lagoon | 200,000 | |
| Waterdown | Wentworth | 1,937 | Sewers & Secondary | 570,000 | |
| Watford | Lambton | 1,280 | Sewers & Lagoon | 272,000 | |
| Waubaushene | Simcoe | 750 | Sewers & Lagoon | 249,000 | |
| Wheatley | Kent | 1,403 | Sewers & Lagoon | 275,000 | |
| Willoughby Twp. | Welland | 2,023 | Sewers & Lagoon | 300,000 | |
| Woodbridge | York | 2,443 | Sewers & Connection to Metro | 500,000 | |

POLICE VILLAGES

| Baden | Waterloo | 920 | Sewers & Lagoon | 260,000 |
|------------|----------------------------|-------|--------------------|---------|
| Dublin | Perth | 310 | Sewers & Lagoon | 160,000 |
| Earlton | Temiskaming | 690 | Sewers & Lagoon | 235,000 |
| King City | York | 1,773 | Sewers & Secondary | 400,000 |
| Lambeth | Middlesex | 2,407 | Sewers & Lagoon | 320,000 |
| Maple | York | 1,051 | Sewers & Secondary | 280,000 |
| Orleans | Carleton | 1,398 | Sewers & Primary | 250,000 |
| Orono | Northumberland & Durham | 845 | Sewers & Lagoon | 255,000 |
| Rockwood | Wellington | 823 | Sewers & Secondary | 258,000 |
| St. George | Brant | 716 | Sewers & Lagoon | 252,000 |
| St. Jacobs | Waterloo | 722 | Sewers & Lagoon | 247,000 |
| Selkirk | Haldimand | 208 | Sewers & Lagoon | 150,000 |
| Sunderland | Ontario | 593 | Sewers & Lagoon | 250,000 |



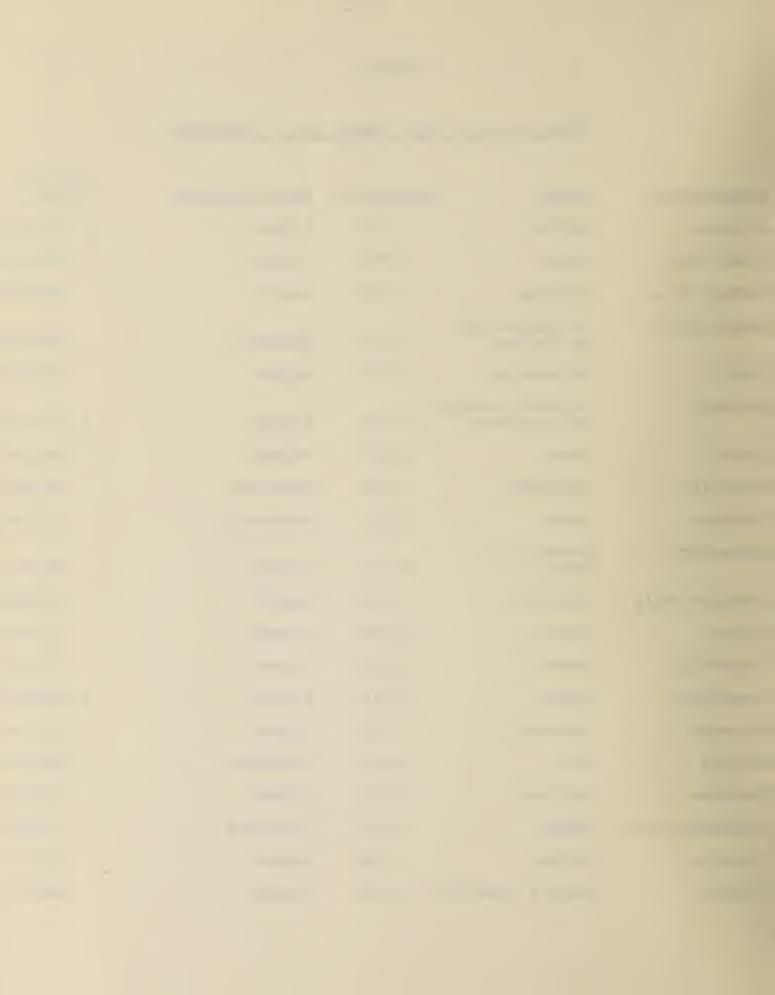
| Municipality | County | Population | Works Required | Estimated Cost | |
|--------------|-----------|------------|--------------------|----------------|--|
| Thamesford | Oxford | 1,074 | Sewers & Lagoon | \$ 270,000 | |
| Unionville | York | 616 | Sewers & Secondary | 180,000 | |
| Verner | Nipissing | 944 | Sewers & Lagoon | 258,000 | |
| Vineland | Lincoln | 1,025 | Sewers & Lagoon | 265,000 | |



TABLE V

MUNICIPALITIES WITH SEWERS AND NO TREATMENT

| | | | | Estimated |
|-----------------|--------------------------------|------------|----------------|------------|
| Municipality | County | Population | Works Required | Cost |
| Arnprior | Renfrew | 5,632 | Primary | \$ 350,000 |
| Blind River | Algoma | 3,796 | Primary | 300,000 |
| Calvert Twp. | Cochrane | 5,586 | Lagoon | 300,000 |
| Campbellford | Northumberland and Durham | 3,472 | Secondary | 270,000 |
| Cobalt | Temiskaming | 2,251 | Lagoon | 200,000 |
| Cornwall | Stormont, Dundas and Glengarry | 42,856 | Primary | 9,650,000 |
| Dryden | Kenora | 6,230 | Primary | 1,000,000 |
| Dunnville | Haldimand | 5,491 | Secondary | 550,000 |
| Goderich | Huron | 6,657 | Secondary | 545,000 |
| Hawkesbury | Prescott & Russell | 8,745 | Primary | 700,000 |
| Iroquois Falls | Cochrane | 1,694 | Lagoon | 100,000 |
| Kenora | Kenora | 10,996 | Primary | 475,000 |
| Kingsville | Essex | 3,459 | Lagoon | 385,000 |
| Leamington | Essex | 8,934 | Primary | 1,000,000 |
| Matheson | Cochrane | 914 | Lagoon | 100,000 |
| Meaford | Grey | 3,685 | Secondary | 400,000 |
| Pembroke | Renfrew | 16,223 | Primary | 785,000 |
| Penetanguishene | Simcoe | 5,007 | Secondary | 232,000 |
| Petrolia | Lambton | 3,744 | Lagoon | 250,000 |
| Prescott | Leeds & Grenvill | e 5,151 | Primary | 600,000 |



| Municipality | County | Population | Works Required | Estimated Cost |
|-------------------|-------------|------------|------------------------------|----------------|
| Red Rock | Thunder Bay | 1,861 | Primary | \$ 200,000 |
| Renfrew | Renfrew | 8,485 | Primary | 450,000 |
| Smooth Rock Falls | Cochrane | 1,084 | Lagoon | 700,000 |
| Southampton | Bruce | 1,814 | Lagoon | 250,000 |
| Sturgeon Falls | Nipissing | 6,651 | Lagoon | 735,000 |
| Sudbury | Sudbury | 79,987 | Primary | 6,500,000 |
| Sundridge | Parry Sound | 796 | Lagoon | 150,000 |
| Thornbury | Grey | 1,139 | Secondary | 330,000 |
| Thorold | Welland | 8,679 | Connection to St. Catharines | 533,000 |
| Thorold Twp. | Welland | 7,055 | Connection to St. Catharines | 560,000 |
| Walkerton | Bruce | 4,069 | Lagoon | 300,000 |
| Welland | Welland | 36,712 | Secondary | 14,400,000 |
| Windsor | Essex | 112,049 | Primary | 26,600,000 |

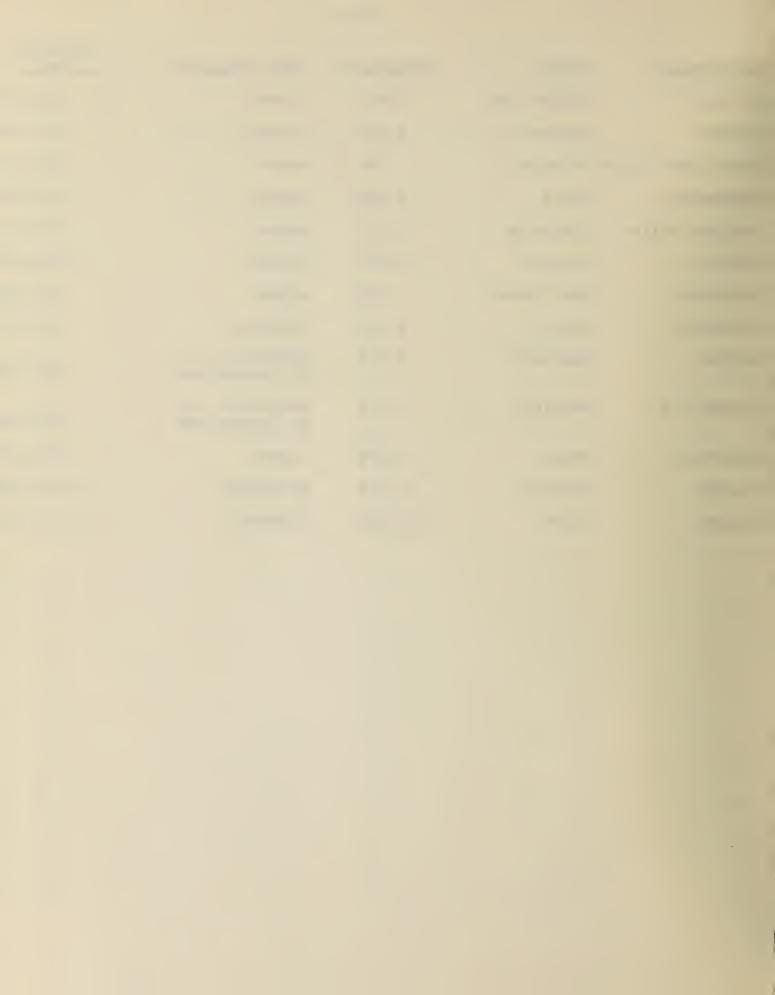
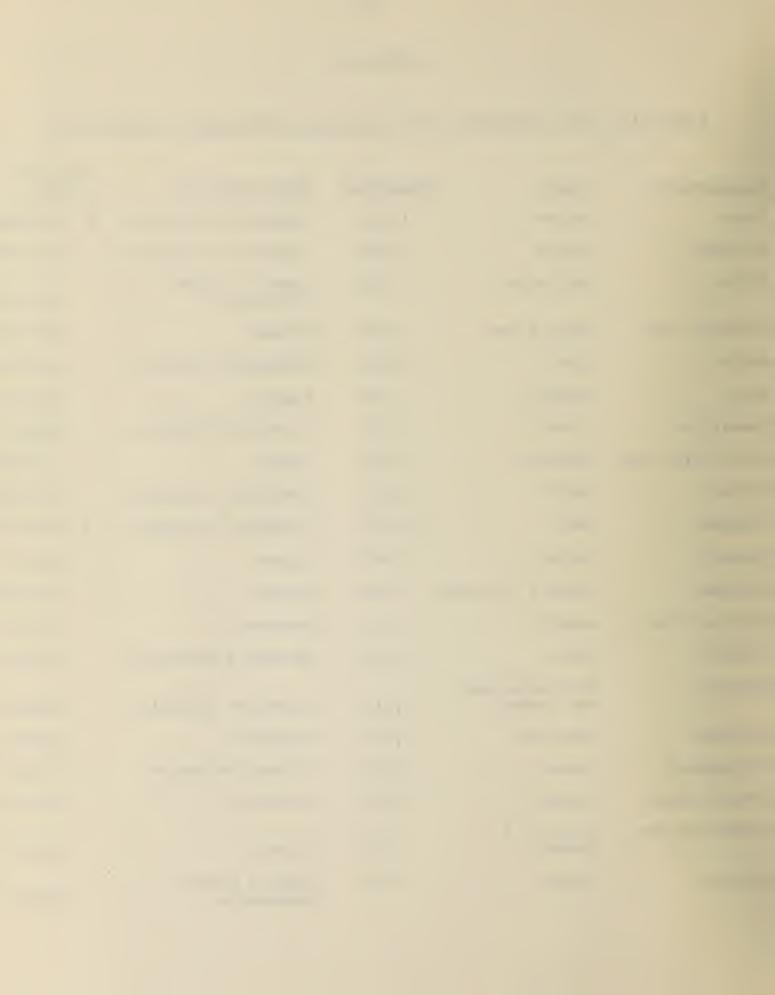


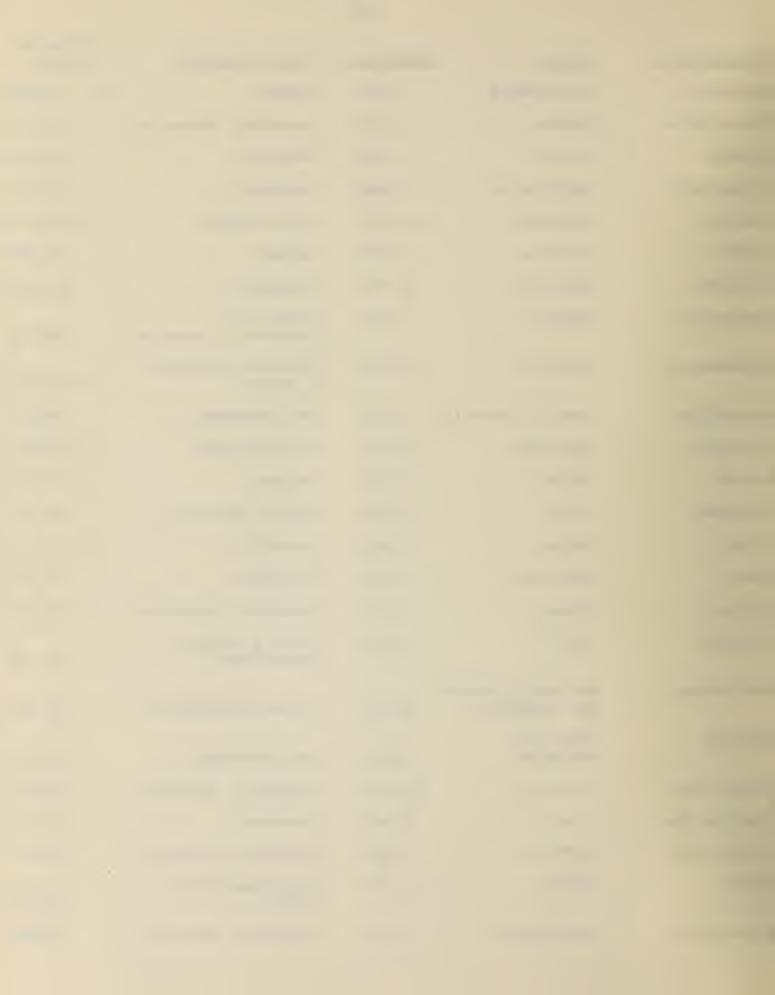
TABLE VI

MUNICIPAL SEWAGE TREATMENT PLANTS THAT ARE OVERLOADED OR INEFFICIENT

| Municipality | County | Popu l ation | Works Required | Estimated Cost |
|------------------|---------------------------|---------------------|------------------------------|-------------------|
| Acton | Halton | | | |
| | | 4,354 | Secondary Extension | |
| Alliston | Simcoe | 3,057 | Secondary Extension | 165,000 |
| Arthur | Wellington | 1,238 | Sewer & Lagoon Extensions | 200,000 |
| Atikokan Twp. | Rainy River | 5,829 | Primary | 400,000 |
| Aurora | York | 9,518 | Secondary Extension | 350,000 |
| Bala | Muskoka | 494 | Lagoon | 100,000 |
| Beamsville | Lincoln | 3,290 | Secondary Extension | 200,000 |
| Black River Twp. | Cochrane | 3,285 | Lagoon | 60,000 |
| Bolton | Peel | 2,152 | Secondary Extension | 200,000 |
| Brampton | Peel | 26,191 | Secondary Extension | 1,500,000 |
| Capreol | Sudbury | 3,006 | Lagoon | 480,000 |
| Cardinal | Leeds & Grenville | e 1,990 | Lagoon | 150,000 |
| Carleton Place | Lanark | 4,771 | Secondary | 400,000 |
| Clinton | Huron | 3,552 | Secondary Extension | 200,000 |
| Cobourg | Northumberland and Durham | 9,917 | Secondary Extension | 850,000 |
| Cochrane | Cochrane | 4,617 | Secondary | 330,000 |
| Collingwood | Simcoe | 8,362 | Primary Extension | 350,000 |
| Crystal Beach | Welland | 1,812 | Secondary | 250,000 |
| Cumberland Twp. | Prescott & Russell | 5,825 | Primary | 200,000 |
| Elmvale | Simcoe | 976 | Sewer & Lagoon Extensions | 170,000 |



| Municipality | County | Population | Works Required | Estimated Cost |
|---------------------|--------------------------------|------------|-----------------------------------|----------------|
| Englehart | Temiskaming | 1,790 | Lagoon | \$ 87,000 |
| Gravenhurst | Muskoka | 3,202 | Secondary Extension | 325,000 |
| Grimsby | Lincoln | 5,719 | Secondary | 250,000 |
| Ha ile ybury | Tem iskami ng | 2,842 | Secondary | 350,000 |
| Hamilton | Wentworth | 271,300 | Add Secondary | 10,000,000 |
| Hearst | Cochrane | 2,587 | Lagoon | 200,000 |
| Hespeler | Waterloo | 4,785 | Secondary | 861,000 |
| Hunt svill e | Muskoka | 3,072 | Sewers and Secondary Extension | 300,000 |
| Kapuskasing | Cochrane | 11,887 | Primary Extension & Lagoon | 2,132,000 |
| Kempt ville | Leeds & Grenvil | le 2,064 | Add Secondary | 100,000 |
| Kingston | Frontenac | 50,011 | Add Secondary | 1,500,000 |
| Levack | Sudbury | 3,018 | Primary | 300,000 |
| Listowel | Perth | 4,220 | Lagoon Extension | 100,000 |
| Lively | Sudbury | 3,244 | Secondary | 400,000 |
| Madoc | Hastings | 1,491 | Secondary | 90,000 |
| Milton | Halton | 5,868 | Secondary Extension | 280,000 |
| Mitchell | Perth | 2,294 | Sewer & Lagoon Extensions | 120,000 |
| Morrisburg | Stormont, Dundas and Glengarry | 1,945 | Primary Extension | 150,000 |
| Napanee | Lennox & Addington | 4,404 | Add Secondary | 450,000 |
| Nepean Twp. | Carleton | 30,321 | Secondary Extension | 800,000 |
| Niagara Twp. | Lincoln | 8,583 | Secondary | 650,000 |
| Orangeville | Dufferin | 4,934 | Secondary Extension | 250,000 |
| Oshawa | Ontario | 65,464 | Improvements to S.T.P. | 100,000 |
| Palmerston | Wellington | 1,580 | Secondary Extension | 150,000 |



| Municipality | County | <u>Population</u> | Works Required | Estimated Cost |
|------------------|-------------|-------------------|------------------------------|-------------------|
| Port Elgin | Bruce | 1,921 | Add Secondary | \$ 150,000 |
| Rainy River | Rainy River | 1,133 | Primary | 250,000 |
| Richmond Hill | York | 18,606 | Secondary Extension | 700,000 |
| St. Catharines | Lincoln | 85,732 | Primary | 6,000,000 |
| St. Thomas | Elgin | 22,456 | Secondary Extension | 900,000 |
| Sandwich W. Twp. | Essex | 30,149 | Secondary | 2,500,000 |
| Seaforth | Huron | 2,332 | Lagoon | 447,000 |
| Sioux Lookout | Kenora | 2,665 | Improvements to S.T.P. | 100,000 |
| Smiths Falls | Lanark | 9,655 | Primary Extension | 365,000 |
| Stirling | Hastings | 1,344 | Sewer & Lagoon Extensions | 50,000 |
| Stoney Creek | Wentworth | 6,726 | Connection to Hamilton | 250,000 |
| Sutton | York | 1,413 | Sewer & Lagoon Extensions | 92,000 |
| Tavistock | Oxford | 1,190 | Sewer & Lagoon Extensions | 130,000 |
| Teck Twp. | Temiskaming | 17,582 | Primary | 900,000 |
| Tisdale Twp. | Cochrane | 8,569 | Lagoon | 250,000 |
| Tottenham | Simcoe | 797 | Lagoon | 100,000 |
| Trenton | Hastings | 13,823 | Add Secondary | 930,000 |
| Tweed | Hastings | 1,752 | Secondary | 200,000 |
| Waterford | Norfolk | 2,361 | Sewer & Lagoon Extensions | 150,000 |
| Waterloo | Waterloo | 23,401 | Secondary Extension | 1,000,000 |
| Whitney Twp. | Cochrane | 1,828 | Lagoon | 250,000 |
| Woodstock | Oxford | 21,677 | Secondary Extension | 1,100,000 |



POLICE VILLAGES

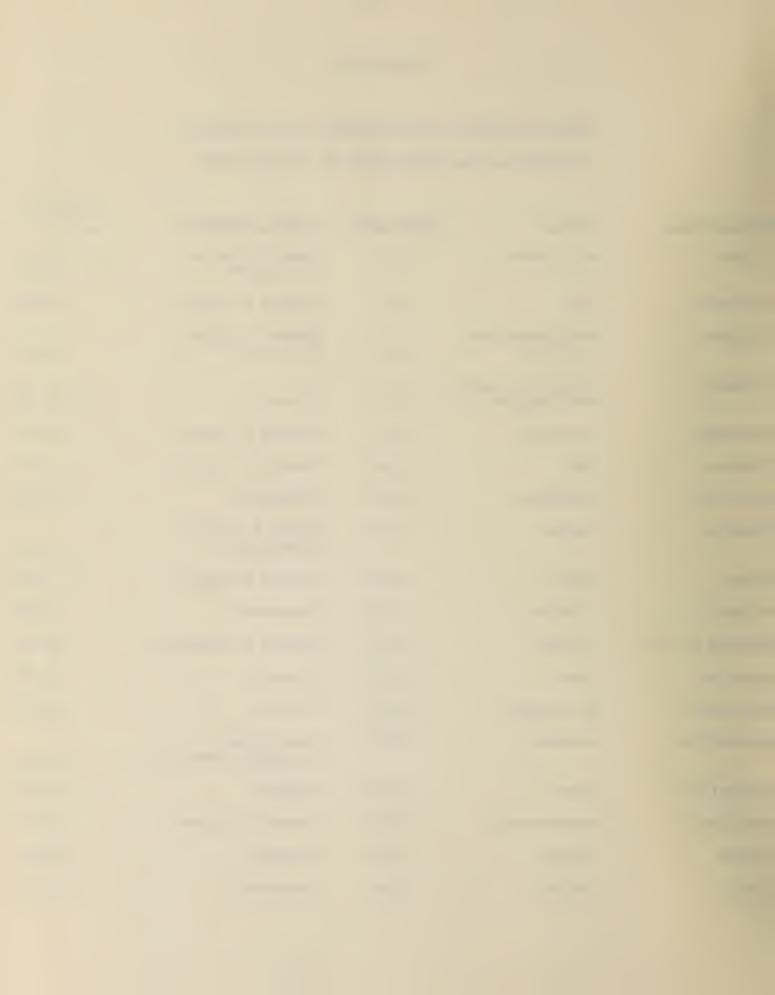
| Municipality | <u>Count y</u> | Population | Works Required | Estimated Cost |
|--------------|----------------|------------|-----------------------------------|-------------------|
| Corunna | Lambton | 1,855 | Sewers and Secondary Extension | \$ 200,000 |
| Smithville | Lincoln | 902 | Sewer & Lagoon Extensions | 60,000 |



TABLE VII

MUNICIPALITIES WHERE FINANCIAL LIMITATIONS RESTRICT THE DEVELOPMENT OF SEWAGE WORKS

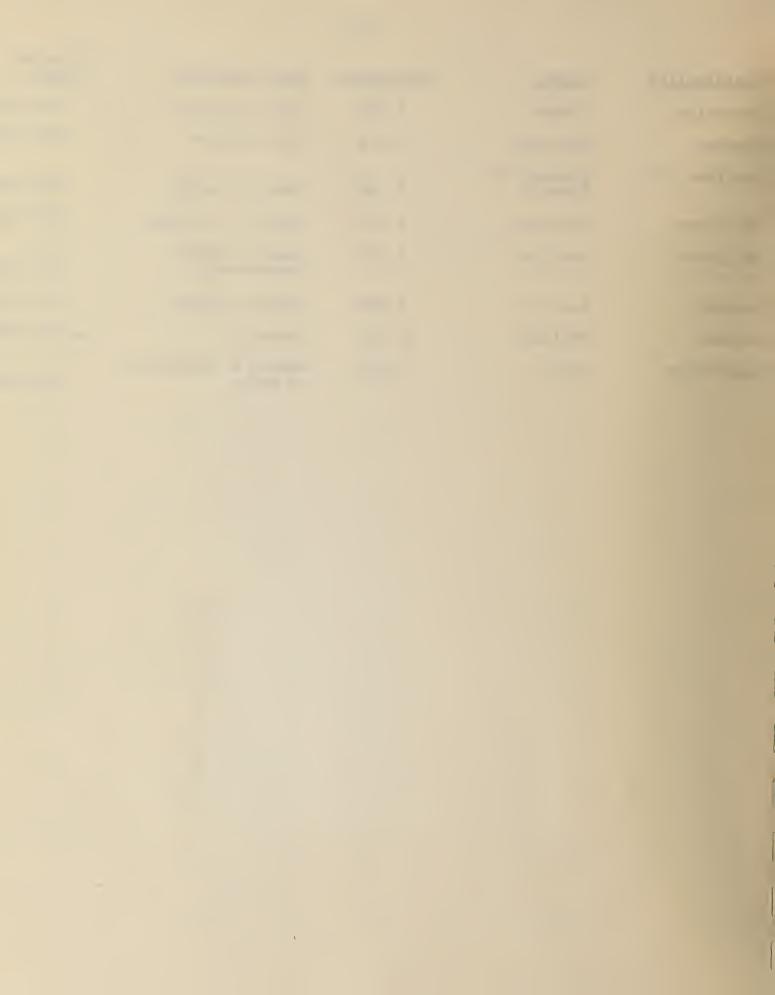
| Municipali | ty | County | Population | Works Required | Estimated Cost |
|------------|------|--------------------------------|------------|------------------------------------|----------------|
| Arthur | | Wellington | 1,238 | Sewer & Lagoon Extensions | \$ 200,000 |
| Blenheim | | Kent | 3,331 | Sewers & Lagoon | 450,000 |
| Brighton | | Northumberland & Durham | 2,686 | Sewer & Lagoon Extensions | 460,000 |
| Cornwall | | Stormont, Dundas and Glengarry | 42,856 | Primary | 9,650,000 |
| Deseronto | | Hastings | 1,775 | Sewers & Lagoon | 300,000 |
| Dresden | | Kent | 2,304 | Sewers & Lagoon | 335,000 |
| Dunnville | | Haldimand | 5,491 | Secondary | 550,000 |
| Elmvale | | Simcoe | 976 | Sewer & Lagoon Extensions | 170,000 |
| Essex | | Essex | 3,494 | Sewers & Lagoon | 267,000 |
| Grimsby | | Lincoln | 5,719 | Secondary | 250,000 |
| Grimsby N. | Twp. | Lincoln | 6,212 | Sewers & Secondary | 900,000 |
| Goderich | | Huron | 6,657 | Primary | 545,000 |
| Harriston | | Wellington | 1,655 | Lagoon | 140,000 |
| Huntsville | | Muskoka | 3,072 | Sewers and Secondary Extensions | 300,000 |
| Kingsville | | Essex | 3,459 | Lagoon | 385,000 |
| Lakefield | | Peterborough | 2,200 | Sewers & Lagoon | 440,000 |
| Levack | | Sudbury | 3,018 | Primary | 300,000 |
| Lively | | Sudbury | 3,244 | Secondary | 400,000 |



| Municipality | <u>County</u> <u>F</u> | opulation | Works Required | Estimated Cost |
|----------------------|------------------------|-----------|--------------------------------|----------------|
| Little Current | Manit oulin | 1,554 | Extension of Sewers and Lagoon | \$ 328,000 |
| L'Orignal | Prescott & Russell | 1,289 | Sewers & Lagoon | 283,000 |
| Meaford | Grey | 3,685 | Secondary | 400,000 |
| Merrickville | Leeds & Grenville | 890 | Sewers & Lagoon | 200,000 |
| Milverton | Perth | 1,122 | Sewers & Lagoon | 260,000 |
| Mitchell | Perth | 2,294 | Sewer & Lagoon Extensions | 120,000 |
| Norwich | Oxford | 1,662 | Sewers & Lagoon | 430,000 |
| Orangeville | Dufferin | 4,934 | Secondary | 250,000 |
| Pakenham Twp. | Lanark | 1,163 | Sewers & Lagoon | 200,000 |
| Penetanguishene | Simcoe | 5,007 | Secondary | 232,000 |
| Pickering Village | Ontario | 1,816 | Sewers & Secondary | 580,000 |
| Port Perry | Ontario | 2,353 | Sewers & Lagoon | 335,000 |
| Prescott | Leeds & Grenville | 5,151 | Primary | 600,000 |
| Rockland | Prescott & Russell | 3,470 | Sewers & Lagoon | 226,000 |
| St. Catharines | Lincoln | 85,732 | Primary | 6,000,000 |
| St. Marys | Perth | 4,646 | Sewers & Secondary | 1,000,000 |
| Seaforth | Huron | 2,332 | Lagoon | 447,000 |
| Smithville | Lincoln | 902 | Sewer & Lagoon Extensions | 60,000 |
| Stirling | Hastings | 1,344 | Sewer & Lagoon Extensions | 50,000 |
| Sudbury | Sudbury | 79,987 | Primary | 6,500,000 |
| Sutton | York | 1,413 | Sewer & Lagoon Extensions | 92,000 |
| Tavistock | Oxford | 1,190 | Sewer & Lagoon Extensions | 130,000 |



| Municipality | County | Population | Works Required | Estimated Cost |
|---------------|--------------------|------------|------------------------------|----------------|
| Thessalon | Algoma | 1,707 | Sewers & Lagoon | \$ 290,000 |
| Trenton | Hastings | 13,823 | Add Secondary | 930,000 |
| Vankleek Hill | Prescott & Russell | 1,708 | Sewers & Lagoon | 290,000 |
| Waterdown | Wentworth | 1,937 | Sewers & Secondary | 570,000 |
| Waterford | Norfolk | 2,361 | Sewer & Lagoon Extensions | 150,000 |
| Watford | Lambton | 1,280 | Sewers & Lagoon | 272,000 |
| Welland | Welland | 36,712 | Secondary | 14,400,000 |
| Woodbridge | York | 2,443 | Sewers & Connection to Metro | 500,000 |



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